



King's Research Portal

DOI:

[10.1111/eip.12908](https://doi.org/10.1111/eip.12908)

Document Version

Peer reviewed version

[Link to publication record in King's Research Portal](#)

Citation for published version (APA):

Solmi, M., Durbaba, S., Ashworth, M., & Fusar-Poli, P. (2019). Proportion of young people in the general population consulting general practitioners: potential for mental health screening and prevention. *Early Intervention in Psychiatry*. <https://doi.org/10.1111/eip.12908>

Citing this paper

Please note that where the full-text provided on King's Research Portal is the Author Accepted Manuscript or Post-Print version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version for pagination, volume/issue, and date of publication details. And where the final published version is provided on the Research Portal, if citing you are again advised to check the publisher's website for any subsequent corrections.

General rights

Copyright and moral rights for the publications made accessible in the Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the Research Portal

Take down policy

If you believe that this document breaches copyright please contact librarypure@kcl.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

PROPORTION OF YOUNG PEOPLE IN THE GENERAL POPULATION CONSULTING GENERAL PRACTITIONERS: POTENTIAL FOR MENTAL HEALTH SCREENING AND PREVENTION

Marco Solmi,^{1,2} Stevo Durbaba,³ Mark Ashworth,³ Paolo Fusar-Poli^{2,4,5,6}

¹ Neurosciences Department, University of Padua, Padua, Italy;

² Early Psychosis: Interventions and Clinical-detection (EPIC) lab, Department of Psychosis Studies, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, United Kingdom;

³ School of Population Health and Environmental Sciences, King's College London, London;

⁴OASIS service, South London and Maudsley NHS Foundation Trust, London, UK;

⁵Department of Brain and Behavioral Sciences, University of Pavia, Pavia, Italy;

⁶National Institute for Health Research Maudsley Biomedical Research Centre, South London and Maudsley NHS Foundation Trust, London, UK.

Running head

General Practitioners for preventing psychosis

Corresponding author:

Marco Solmi, MD, PhD

Early Psychosis: Interventions and Clinical-detection (EPIC) lab, Department of Psychosis Studies, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, United Kingdom

Neurosciences Department, University of Padua, Padua, Italy

Marco.solmi83@gmail.com - +390498213830 – Via Giustiniani, 5 – Padua - Italy

Key words. Mental health, prevention, general practitioner

ABSTRACT

Aim. One of the main obstacles with prevention in psychiatry is low detection of young subjects at risk for psychosis. The aim of the present is to test whether General Practitioners' (GP) offices are possible setting for prevention of mental illness.

Methods. We Used an Electronic Health Record database (Datanet) representing South-London (Lambeth), where frequency of GP visits were available for each registered subject.

Results. We show that in 2018 out of almost 175,000 subjects aged 12 to 35, almost six out of ten people were seen by their General practitioner at least once in 2018, and considering those subjects with at least one medical condition, around nine subjects out of ten did the same.

Conclusions. A high proportion of adolescents and young adults are seen by GPS at least once per year. GP offices should be tested as possible setting for detection of subjects at risk for mental illness, in particular in subjects with risk factors for mental illness.

INTRODUCTION

Prevention in medicine, such as oncology among other fields, has avoided thousands of deaths over the last 20 years.(Siegel, Ma, Zou, & Jemal, 2014) However, despite the evidence showing that people suffering from Severe Mental Illnesses (SMIs, e.g. psychosis) have an onset in the age range 12-35(P. Fusar-Poli, 2019; Kessler et al., 2005) and a reduced life-expectancy of around 15 to 20 years compared with the general population,(Hjorthoj, Sturup, McGrath, & Nordentoft, 2017) prevention in psychiatry is now just going through its infancy. Prevention in psychiatry can be cost-effective in the long-term(P. Fusar-Poli, McGorry, & Kane, 2017). However, recent evidence has also shown that the rate-limiting step for an effective prevention of the onset of SMIs is the modest ability to detect patients who are at risk. For instance, patients who later develop psychosis are rarely detected in current mental health services before developing the disorder, with percentages as low as 5%(P. Fusar-Poli, Rutigliano, et al., 2017) to 12%.(McGorry, Hartmann, Spooner, & Nelson, 2018) On the other hand, evidence has shown that outreaching activities decrease the prognostic accuracy of structured interviews, such as Comprehensive Assessment of At Risk Mental State (CAARMS),(Yung et al., 2005) suggesting that subjects who are not help-seeking may have a too low pre-interview risk (i.e. general population) to be correctly defined “at risk” by interviews.(P. Fusar-Poli et al., 2016) Thus, there is an urgent need to improve the ability to detect young people who may be at risk of developing SMIs, but medical or psychological settings where subjects generally seek help should be preferred over other community settings. It has been proposed that primary care should be a key setting within the network of prevention or early detection of mental illness, given that most subjects with psychiatric symptoms refer to their GP initially. The present work aims to estimate the yearly proportion of young people aged 12-35 in the general population consulting primary care general practitioners (GPs) in the UK. This may inform whether mental health screening in GPs is a viable approach to improve the detection of individuals at risk for SMIs.

METHODS.

We used data from a retrospective cohort study using an Electronic Health Record database (Datanet) representing South-London (Lambeth) primary care GPs in 2018, stratified by key sociodemographic characteristics (gender and age) and reporting the following variables. Number of individuals registered with GPs, percentage of registered individuals consulting the GP at least once, number and percentage of registered individuals presenting with at least one medical condition, percentage of individuals with at least one medical condition consulting the GP at least once. The list of Long-Term Conditions was based on the Quality and Outcomes Framework indicators, reported in table 1. Data were analysed with descriptive statistics. Values from different age ranges were also pooled through a random-effect meta-analysis to estimate the odds ratio (OR) and its 95% confidence intervals (CI) of females vs males 12-35 years old individuals consulting GPs. Restrictions apply to the availability of these data, which were used under license for this study.

RESULTS

The detailed results are reported in Table 2, Figures 1 and 2. Overall 59.24% of young people aged 12-35 years consult GPs per year, with an increase up to 60% between those aged 12-25 years (overall around seven women out of ten, and one man out of two). Moreover, 90.31% of people aged 12-35 years and 90% of people aged 12-25 years who are suffering from at least one medical condition consult GPs (more than 9 women out of ten, and almost nine men out of ten) yearly. Females aged 12-35 years were more likely to consult GPs than males, OR=2.097 (95%CI 1.777-2.474, $p<0.001$), in particular if they were presenting with at least one medical condition OR=3.119 (95%CI 2.425-4.010, $p<0.001$).

DISCUSSION

This study demonstrates that the majority of the young general population at the highest peak of risk for the development of SMIs access GPs each year. Given that generally subjects refer to GP seeking for help for a given symptom concern, in case of subjects referring for early psychiatric symptoms there might be a sufficient risk enrichment compared with the general population to make screening instruments and questionnaires meaningful. The clinical context is crucial in prevention of mental illness, given the loss of prognostic accuracy of standard “at risk” assessment tools in the context of non help-seeking general population.(P. Fusar-Poli et al., 2016)

This finding poses the rationale for implementing mental health screening programmes for SMIs in primary care. Availability of easy-to-administer screening questionnaires may facilitate the implementation of these approaches.(Oliver, Radua, Reichenberg, Uher, & Fusar-Poli, 2019) And for those subjects scoring positive at screening instruments, specialist referral should be considered.

Moreover, in the case of the presence of a medical condition, the vast majority of young people accessed GP per year. Given the high comorbidity between somatic and mental problems during the early stages of SMIs, screening this subgroup could be potentially valuable, together with subjects exposed to risk factors for mental illness.(Belbasis et al., 2018; Bortolato et al., 2017; Fullana et al., 2019; Kim et al., 2019; Kohler et al., 2018; Oliver, Reilly, et al., 2019; Radua et al., 2018; Tortella-Feliu et al., 2019)

Finally, while screening primary care for SMIs to guide preventive approaches seems feasible for females, male individuals are more challenging to detect. To overcome this issue mental health screening campaigns should accurately tailor gender differences.

Prevention should be promoted in primary care targeting pathogenic behaviors and mental illness in general, and not focusing on a single disease,(Sanci et al., 2015; Tylee, Haller, Graham, Churchill, & Sanci, 2007) given evidence supporting the efficacy of screening and interventions for multiple health compromising behaviours and mental health disorders in primary care settings on several health outcomes.(Webb, Kauer, Ozer, Haller, & Sanci, 2016) Also, screening and prevention in primary care might not be enough, and GPs should be aware of a precise path to follow when a subjects needs a specialist evaluation.

In conclusion, GPs offices seem a promising setting to improve prevention in psychiatry, and future studies should test whether implementing screening strategies in GPS offices increases the detection rates of prevention services of those subjects who later develop psychosis.

Acknowledgements

This study was supported by the King's College London Confidence in Concept award from the Medical Research Council (MRC) (MC_PC_16048) to Paolo Fusar-Poli.

Conflict of interest

Authors declare no conflict of interest.

References

- Belbasis, L., Kohler, C. A., Stefanis, N., Stubbs, B., van Os, J., Vieta, E., . . . Evangelou, E. (2018). Risk factors and peripheral biomarkers for schizophrenia spectrum disorders: an umbrella review of meta-analyses. *Acta Psychiatr Scand*, 137(2), 88-97. doi:10.1111/acps.12847
- Bortolato, B., Kohler, C. A., Evangelou, E., Leon-Caballero, J., Solmi, M., Stubbs, B., . . . Carvalho, A. F. (2017). Systematic assessment of environmental risk factors for bipolar disorder: an umbrella review of systematic reviews and meta-analyses. *Bipolar Disord*, 19(2), 84-96. doi:10.1111/bdi.12490
- Fullana, M. A., Tortella-Feliu, M., Fernandez de la Cruz, L., Chamorro, J., Perez-Vigil, A., Ioannidis, J. P. A., . . . Radua, J. (2019). Risk and protective factors for anxiety and obsessive-compulsive disorders: an umbrella review of systematic reviews and meta-analyses. *Psychol Med*, 1-16. doi:10.1017/S0033291719001247
- Fusar-Poli, P. (2019). INTEGRATED MENTAL HEALTH SERVICES FOR THE DEVELOPMENTAL PERIOD (0 TO 25 YEARS). *Frontiers Psychiatry*, *In press*.
- Fusar-Poli, P., McGorry, P. D., & Kane, J. M. (2017). Improving outcomes of first-episode psychosis: an overview. *World Psychiatry*, 16(3), 251-265. doi:10.1002/wps.20446
- Fusar-Poli, P., Rutigliano, G., Stahl, D., Davies, C., Bonoldi, I., Reilly, T., & McGuire, P. (2017). Development and Validation of a Clinically Based Risk Calculator for the Transdiagnostic Prediction of Psychosis. *JAMA Psychiatry*, 74(5), 493-500. doi:10.1001/jamapsychiatry.2017.0284
- Fusar-Poli, P., Schultze-Lutter, F., Cappucciati, M., Rutigliano, G., Bonoldi, I., Stahl, D., . . . McGuire, P. (2016). The Dark Side of the Moon: Meta-analytical Impact of Recruitment Strategies on Risk Enrichment in the Clinical High Risk State for Psychosis. *Schizophr Bull*, 42(3), 732-743. doi:10.1093/schbul/sbv162
- Hjorthoj, C., Sturup, A. E., McGrath, J. J., & Nordentoft, M. (2017). Years of potential life lost and life expectancy in schizophrenia: a systematic review and meta-analysis. *Lancet Psychiatry*, 4(4), 295-301. doi:10.1016/S2215-0366(17)30078-0
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry*, 62(6), 593-602. doi:10.1001/archpsyc.62.6.593
- Kim, J. Y., Son, M. J., Son, C. Y., Radua, J., Eisenhut, M., Gressier, F., . . . Fusar-Poli, P. (2019). Environmental risk factors and biomarkers for autism spectrum disorder: an umbrella review of the evidence. *Lancet Psychiatry*, 6(7), 590-600. doi:10.1016/S2215-0366(19)30181-6
- Kohler, C. A., Evangelou, E., Stubbs, B., Solmi, M., Veronese, N., Belbasis, L., . . . Carvalho, A. F. (2018). Mapping risk factors for depression across the lifespan: An umbrella review of evidence from meta-analyses and Mendelian randomization studies. *J Psychiatr Res*, 103, 189-207. doi:10.1016/j.jpsychires.2018.05.020
- McGorry, P. D., Hartmann, J. A., Spooner, R., & Nelson, B. (2018). Beyond the "at risk mental state" concept: transitioning to transdiagnostic psychiatry. *World Psychiatry*, 17(2), 133-142. doi:10.1002/wps.20514
- Oliver, D., Radua, J., Reichenberg, A., Uher, R., & Fusar-Poli, P. (2019). Psychosis Polyrisk Score (PPS) for the Detection of Individuals At-Risk and the Prediction of Their Outcomes. *Front Psychiatry*, 10, 174. doi:10.3389/fpsy.2019.00174
- Oliver, D., Reilly, T. J., Baccaredda Boy, O., Petros, N., Davies, C., Borgwardt, S., . . . Fusar-Poli, P. (2019). What Causes the Onset of Psychosis in Individuals at Clinical High Risk? A Meta-analysis of Risk and Protective Factors. *Schizophr Bull*. doi:10.1093/schbul/sbz039
- Radua, J., Ramella-Cravaro, V., Ioannidis, J. P. A., Reichenberg, A., Phipphothatsanee, N., Amir, T., . . . Fusar-Poli, P. (2018). What causes psychosis? An umbrella review of risk and protective factors. *World Psychiatry*, 17(1), 49-66. doi:10.1002/wps.20490
- Sanci, L., Chondros, P., Sawyer, S., Pirkis, J., Ozer, E., Hegarty, K., . . . Patton, G. (2015). Responding to Young People's Health Risks in Primary Care: A Cluster Randomised Trial of Training Clinicians in Screening and Motivational Interviewing. *PLoS One*, 10(9), e0137581. doi:10.1371/journal.pone.0137581
- Siegel, R., Ma, J., Zou, Z., & Jemal, A. (2014). Cancer statistics, 2014. *CA Cancer J Clin*, 64(1), 9-29. doi:10.3322/caac.21208

- Tortella-Feliu, M., Fullana, M. A., Perez-Vigil, A., Torres, X., Chamorro, J., Littarelli, S. A., . . . Fernandez de la Cruz, L. (2019). Risk factors for posttraumatic stress disorder: An umbrella review of systematic reviews and meta-analyses. *Neurosci Biobehav Rev*, *107*, 154-165.
doi:10.1016/j.neubiorev.2019.09.013
- Tylee, A., Haller, D. M., Graham, T., Churchill, R., & Sanci, L. A. (2007). Youth-friendly primary-care services: how are we doing and what more needs to be done? *Lancet*, *369*(9572), 1565-1573.
doi:10.1016/S0140-6736(07)60371-7
- Webb, M. J., Kauer, S. D., Ozer, E. M., Haller, D. M., & Sanci, L. A. (2016). Does screening for and intervening with multiple health compromising behaviours and mental health disorders amongst young people attending primary care improve health outcomes? A systematic review. *BMC Fam Pract*, *17*, 104.
doi:10.1186/s12875-016-0504-1
- Yung, A. R., Yuen, H. P., McGorry, P. D., Phillips, L. J., Kelly, D., Dell'Olio, M., . . . Buckby, J. (2005). Mapping the onset of psychosis: the Comprehensive Assessment of At-Risk Mental States. *Aust N Z J Psychiatry*, *39*(11-12), 964-971. doi:10.1080/j.1440-1614.2005.01714.x